

**Price \$1.00**

April 1982

SATURDAY, April 17th, 1982

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ANIMATE !!

(and/or bad)

ON PAGE 3

MILATARI to sell mailing list

The board also approved the setting up of a swap table will be set up for the convenience of the members. You may sell or trade surplus hardware and software with other members. It is the club's policy not to allow selling or trading of copies of copyright protected software.

Review of the PERCOM SEPARATOR (tm)

by David Frazer

I, like many of you, purchased my 810 disk drive before ATARI redesigned their electronics board in the 810 to include a data separator board. (Most drive manufactured before August 1981 fall into this category.) The older drives are plagued with read/write problems, lack of compatibility with other ATARI drives, lost data, frustrations, etc. Because most these machines are out of warranty, there is little hope for no-charge upgrades from ATARI.

What is the cause of this problem? The disk read-data separation arrangement in the older ATARI 810 disk drives uses the internal data separator of the 1771 disk controller IC, a part of the disk controller card. Use of the 1771 internal data separator is NOT recommended by the 1771 manufacture! The following note appears in the middle of page 17 of the Western Digital FD1771 data sheet:

NOTE

Internal data separation may work for some applications. However, for applications requiring high data recovery reliability, WDC recommends external data separation be used.

The solution to this design problem in the older ATARI 810 disk drives is a modification to the disk controller card to include external data separation.

At our last meeting, Gary Nolan demonstrated how to install a data separator board manufactured by Percom Data Company, Inc. of Dallas Texas.

After seeing Gary's demonstration, I decided I might be able to do the same installation. I call PERCOM Data Company (toll free number is 1-800-527-1222) to place my order. The process was easy—they even take plastic money and don't add extra for shipping. The price of the board is \$29.95. Four days later a man in a brown suit, driving a brown truck deposited a small parcel on my door step.

Upon opening the box, I found a poly envelope containing an instruction booklet and a smaller poly bag holding a small printed circuit board. A label on this bag warned not to open until the instructions were read.

I read the instruction through several times before starting in. As Gary demonstrated, getting at the disk controller card was relatively easy. The next step, remounting the crystal so it wouldn't interfere with the new data separator board turned out to be fairly easy.

(con't next column)

PERCOM (con't)

(Do not used to hot of a solder iron, you could loosen another solder joint or damage the crystal.) Moving the 1771 disk controller chip and installing the data separator card are well outlined in the instructions.

I mounted the disk controller card in the drive and tried it on my system before re-assembling the case. (Just in case I had problems.) Everything came up as if I knew what I was doing. I made sure the system booted up properly several times. Then I format 5 disks and check them back for compatibility on my second drive. When I was satisfied with the performance, I buttoned up the case and I am using this unit as Drive 1 in my 2 drive configuration. The whole process took about 1/2 hour.

I can highly encourage anyone with an older drive do this upgrade. I also highly recommend PERCOM's separator board.

Both Gary Nolan and I will be glad to help if you having problems installing a data separator board.

CAUTION

Disassembly of your ATARI 810 disk drive may void the ATA limited warranty, if the warranty period has not expired. You are urged to thoroughly check out your disk drive, and exercise your warranty rights if necessary, before attempting to install the data separator.

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MARCH MEETING NOTES

Forty one people were in attendance at our March meeting. Two systems were set up, one for the demonstrations and for library processing and the second set up to demonstrate the new NEC 8023 printer. Three monitors were connected to the demonstration machine so everyone could have a chance to see the screen details.

Special thanks to Tom Quinn for demonstrating PILOT. This new product from ATARI is the new standard for PILOT (LOGO) in the industry.

A second special thanks to Gary Nolan for the demonstration on how to install a data separator board in an ATARI 810 disk drive. (See review of product elsewhere in this issue).

A item of new business that we will reconsider at our April meeting is the purchase of a gold plating kit. It has been proposed that the club purchase a gold plating kit to plate the connectors on PC cards. Each member using the kit would be expected to re-pay the club for the materials used on his cards. The initial cost was about \$90.00.

MEMBERSHIP CARDS

All paid members of MILATARI will be mail membership cards by the end of April. If you haven't received your card by then, please contact Larry Leskovsek so he can trace your card down.

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APRIL MEETING ADGENDA

Our agenda for the April 17th meeting is:

3:00PM Officers meeting

3:30PM Libraries open
Open socializing

4:00PM Call to Order
Business meeting
Old Business;
Presidents report
Treasures report
Vice-presidents report
Education report
Librarians report
New Business;

Program

MISTER TV SERVICE is now an authorized ATARI computer service center in Milwaukee. Representatives from **MISTER TV SERVICE** will provide the program this month. They will explain how they are organized to handle ATARI service, give us an ideas of their rate structure and find out what our immediate service needs are. If we're luck maybe they will have some OS-B and GTIA chip along to sell.

Roundtable discussions

This time is set asside to share your ideas and search out your needs.

LOCAL SERVICE

MISTER TV SERVICE has become an ATARI Factory Authorized Service Center. This firm does service work only and does not sell hardware or software. Mister TV Service is located at 5455 W. Burleigh Street, Milwaukee 53210. The phone number is (414)873-2415.

SUPPORTING BUSINESS

The folowing business offer a 10% discount to members of MILATARI. The discounts applies to all merchandise except merchandise which is on sale or already discounted. You must show your valid MILATARI membership card to receive your discount.

MICROCOMPUTERS and MAGIC
256 1/2 West Broadway Street
Waukesha, Wi 53186
(414)548-0900

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NEWSLETTERS

Newsletters which are received from other groups will be cataloged in our club library and are available for any member at our monthly meeting. We are currently receiving newsletters from:

the Atari Computer Association of Orange County, Ca.
the Madison Wisconsin Atari Users
the Michigan Atari Computer Enthusiasts
the West Valley ATARI Users Group
the Twincity ATARI Interest Group
the ATARI Computer Club of Toledo
the Waterloo ATARI users Group

We thank those groups for their participation in newsletter exchange.

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BYTES and NIBBLES

A new OS floating point arithmetic chip will be available next month. This chip will reportedly speed up floating point math operations considerably. One example compared the speed of a program drawing a circle using the sine and cosine. An improvement of 4X was observed. This is probably an extreme example, but any BASIC program should be a minimum of 20% faster. Price through dealers is reported to be \$45.00.

(This information from Twincity Atari Interest Group)

Some more casualty of OS-B. MILATARI members report that **SHOOTING GALARY** and **SNUFF** should be added to the list of programs that will not operate with the new OS-B chips installed. Let us know if there are others.

ANIMATE !!

by Ed Alfaro

(Editors note: This article is from the newsletter of the Atari Computer Association of Orange County)

Moving rapidly from one display to another gives the programmer the ability to create animation quickly and easily.

This program moves the display pointer back and forth from text mode and graphics mode images that have been stored in two separate RAM locations.

First, by turning off ANTIC (line 20), we can build separate images 30% faster than if the chip was on. As an added benefit, the screen is black, thereby eliminating having to watch the plotting sequences. The graphics plotting is done "in the dark," which will later be displayed completely drawn when we turn ANTIC back on.

Now we can build the first screen. Save the low and high values the computer assigns to GRAPHICS 2 display location (line 50).

What is line 40? MENTOP is the actual top of existing RAM after storing our first screen (and is also the bottom of our first screen display data).

Line 60 lowers this border line, or "fence" by 4K bytes in RAM--the amount needed for the next display, GR.23. The Atari RAM is incremented in "pages" containing 256 bytes per page. The Basic Reference Manual lists the memory space needed for each graphics mode.

Next, the second display is created with the usual PLOTs and DRAWTOs and the XIO fill command.

Line 130 saves the values for low and high display memory locations, just as in line 50. Now we turn the screen (ANTIC) on in line 140 and start displaying the two images by POKEing 560 and 561, the display pointer, with the stored values (line 150, 170).

Depending on your Atari's memory size, many more screens could be added this way, lowering location 106 for each new screen. Don't forget to POKE 106 to its original value if your program continues.

(program listing - next column)

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The attention span of a computer is only as long as its electrical cord.

ANIMATE Program Listing

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10 GRAPHICS 18
15 NOW=PEEK(559):REM & STORE ANTIC VALUE
20 POKE 559,0:REM & TURNS OFF ANTIC;(SCREEN)
30 POSITION 7,4:PRINT #6;"STOP!!!"
40 MENTOP=PEEK(106):REM & LOCATION OF REAL MENTOP
50 DLOW1=PEEK(560):DLHI1=PEEK(561):REM & STORES DISPLAY
  LOCATIONS FOR FIRST SCREEN
60 POKE POKE 106,MENTOP-16:REM & MOVES TOP OF DISPLAY
  LOCATION DOWN 16 PAGES (4K)
70 REM & DRAW 2ND SCREEN
80 GRAPHICS 23:POKE 559,0:REM & AGAIN, TURN OFF ANTIC
90 SETCOLOR 0,3,4:COLOR 3
100 PLOT 115,45:DRAWTO 115,25:DRAWTO 95,5:DRAWTO 65,5:DRAWTO
  45,25:POSITION 45,45
110 POKE 765,1:XIO 18,#6,0,0,"S:"
120 PLOT 45,45:DRAWTO 65,65:DRAWTO 95,65:DRAWTO 115,45
130 DLOW2=PEEK(560):DLHI2=PEEK(561):REM & MEM LOCATIONS FOR
  2ND SCREEN
140 POKE 559,NOW:REM & TURNS ANTIC ON
150 POKE 560,DLOW1:POKE 561,DLHI1:FOR WAIT = 1 TO 50:NEXT
  WAIT
160 POKE 559,0:POKE 559,NOW:REM & "CLEANS UP" DISPLAY
170 POKE 560,DLOW2:POKE 561,DLHI2:FOR WAIT = 1 TO 50:NEXT
  WAIT
180 GOTO 150
200 REM *****
210 REM & ANIMATE! &
220 REM & BY &
230 REM & ED ALFARO &
240 REM *****

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UNCLASSIFIED ADS

(MILATARI will post ads for its members at no charge. Others \$1.00 per issue. Send ad info to newsletter editor by 1st Saturday of month)

FOR SALE: ATARI Education cartridge, Spelling tapes, US History tapes. \$25 - call Dave after 5 - 542-7242

WANTED: Articles for this newsletter. How about it gals and guys? Send your ideas, programs, reviews, hot tips, whatever to the editor.

SCORE KEEPER: The MILATARI club needs a score keeper to keep track of ours clubs high scoring members. See me at the next meeting or give me a call to volunteer -- editor

MILWAUKEE AREA ATARI USERS GROUP
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MEMBERSHIP INFORMATION

Membership is open to individuals who have an interest in using and programming ATARI computers. The membership includes the subscription to this newsletter and free access to the users' program library. The membership fee is \$12.00 per year. Single newsletters are \$1.00. A guest may attend one meeting at no charge.

SOFTWARE EVALUATION FORM

(All software evaluations will become part of our library)

Your name _____

Program name _____

Where purchased _____ Price _____

Cassette or disk _____ Transferable to disk Y/N ____

Program language(circle) Machine/Basic/Assembler/Pascal/Other

Memory requirements _____K Require special hardware Y/N ____

Program requires: (circle all that apply)

PADDLES JOYSTICKS KEYBOARD PRINTER MODEM OTHER(specify)

If program is a game;

Time limit for game Y/N ____

Increasing difficulty Y/N ____

Multiple players Y/N ____ number of players ____

Quality of program:(circle) POOR FAIR GOOD EXCELLENT

Would you recomend this program to others Y/N ____

Milwaukee Area ATARI Users Group
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User group meets the 3rd Saturday of each month beginning at 3:30 PM.
Meetings are held in the community room of the Waukesha State Bank located
at 110 Madison Street, Waukesha.